

REMARKS

Claims 17-29 are pending. Claims 1, 3-9 and 11-16 have been cancelled and claims 28 and 29 have been added. No new matter has been added by way of this amendment. For instance, new claims 28 and 29 are supported by originally filed claim 9 as well as the present specification at page 5, line 22 to page 6, line 8. Accordingly, no new matter has been added.

In view of the following remarks Applicants respectfully request that the Examiner withdraw all rejections and allow the currently pending claims.

Issues Under 35 U.S.C. §102/103

The Examiner has rejected claims 1 and 3-8 as being anticipated under 35 U.S.C. §102(b) or, in the alternative, obvious under 35 U.S.C. §103(a) over either Takeuchi or Nakamura. Applicants respectfully traverse. Claims 1 and 3-8 have been cancelled. Thus, this rejection is moot. Reconsideration and withdrawal thereof are respectfully requested.

Issues Under 35 U.S.C. §103(a)

The Examiner has rejected claims 9 and 14-16 under 35 U.S.C. §103(a) as being obvious over either Takeuchi or Nakamura in view of Cerquone and EP 0762196 (EP '196). Applicants respectfully traverse. Claims 9 and 14-16 have been cancelled. Thus, this

rejection is moot. Reconsideration and withdrawal thereof are respectfully requested.

The Examiner has rejected claims 12 and 13 under 35 U.S.C. §103(a) as being obvious over Takeuchi and Nakamura in view of JP 10339934 (JP '934). Applicants respectfully traverse. Claims 12 and 13 have been cancelled. Thus, this rejection is moot. Reconsideration and withdrawal thereof are respectfully requested.

The Examiner has rejected claim 11 under 35 U.S.C. §103(a) as being obvious over Takeuchi or Nakamura in view of JP 200011206. Applicants traverse. Claim 11 has been cancelled, thus, this rejection is moot. Reconsideration and withdrawal thereof are respectfully requested.

The Examiner has rejected claims 17-22 and 25-27 under 35 U.S.C. §103(a) as being obvious over Takeuchi or Nakamura in view of the combination of Cerquone and EP '196. The Examiner has also rejected claims 23-24 under 35 U.S.C. §103(a) as being obvious over Takeuchi or Nakamura in view of JP '934.

Applicants respectfully traverse each of the above two rejections.

First, Applicants respectfully submit that the Examiner has failed to present a valid *prima facie* case of obviousness. For instance, based upon the cited references, no motivation exists to prepare a photothermographic material containing both a reducing compound according to formula (1) and a compound represented by

formula (2) or (3). Accordingly, the Examiner has failed to present a valid *prima facie* case of obviousness. However, even if the Examiner has hypothetically established a *prima facie* case of obviousness, the present invention exhibits superior and unexpected results compared to the cited art. Such superior and unexpected results rebut any hypothetical *prima facie* case of obviousness.

In order to illustrate the superior and unexpected results according to the present invention, Applicants have attached a Declaration Pursuant to 37 C.F.R. §1.132 hereto. An executed copy of the Declaration will follow.

A review of the attached Declaration reveals that by incorporating both a reducing compound represented by formula (1) and a compound represented by either formula (2) or (3) in a photothermographic material, there results an unexpected improvement in the sensitivity of the photothermographic material. This improvement is greater than any hypothetically expected improvement.

The following table provides an easy reference for the Examiner to determine which compound falls within the scope of which formula in the attached Declaration.

| Compound | Formula |
|----------|---------|
| D-101    | (1)     |
| D-115    | (1)     |
| D-119    | (1)     |
| D-137    | (1)     |
| I-1      | (2)     |
| I-5      | (2)     |
| I-6      | (2)     |
| I-12     | (2)     |
| II-1     | (3)     |

A review of the attached Declaration reveals that the combination of a reducing compound represented by the formula (1) and a compound represented by the formula (2) or (3) unexpectedly improves sensitivity of the photothermographic material to a great extent. The improvement is far more than the expected sum of the effect obtained by a reducing compound represented by the formula (1) and the effect obtained by a reducing compound represented by the formula (2) or (3). Applicants submit that one skilled in the art could not have readily predicted that the combination of the reducing compounds represented by Formula (1) and the reducing compounds Formula (2) or (3) would create such an unexpected improvement when the claimed invention was made.

A review of the Declaration reveals that Sample 101, which only contains 15.7 mmol of Reducing Compound I-1 falling within Formula (2) as a reducing agent, showed poor sensitivity, particularly when it was developed at a lower temperature. Samples 103 and 104, which contain 15.7 mmol of Reducing Compounds D-101 and D-119 falling within Formula (1), respectively, showed a higher sensitivity but serious fog, particularly when they were developed at 119°C. Samples 121 and 122, wherein the content each of Reducing Compounds D-101 and D-119 was reduced to 157  $\mu$ mol (that is 1/100 of those in Samples 103 and 104), were not developed actually and showed no sensitivity.

Samples 106-109, which contain 15.7 mmol of Reducing Compound I-1 falling within Formula (2) and 157  $\mu$ mol of the reducing compounds falling within Formula (1), unexpectedly showed remarkably improved sensitivity, particularly when they were developed at a lower temperature. Such a remarkable improvement in sensitivity can be observed by merely adding a compound represented by Formula (1) in such a small amount that shows no sensitivity in the absence of other reducing compounds, to a photothermographic material containing a reducing compound represented by Formula (2). This is an unexpected improvement.

Similar remarkable improvements can be observed by adding a compound represented by Formula (1) to a photothermographic material containing a reducing compound represented by Formula (3).

In this regard, please refer to the results of Samples 102, 120 and 122.

Applicants submit that those of skill in the art could not have readily predicted that the combination of the reducing compounds represented by Formula (1) and the reducing compounds represented by Formula (2) and (3) would create such an unexpected improvement when the claimed invention was made.

The Declaration further explains, based upon supporting data, the mechanism by which the unexpected improvement is achieved. Applicants respectfully submit that this mechanism is neither suggested nor described in any of the cited documents, or contemporary art. Accordingly, no motivation existed to combine compounds according to formula (1) and either of formula (2) or (3) with reasonable expectation of achieving unexpected results. Accordingly, any hypothetical *prima facie* case of obviousness is rebutted. Reconsideration and withdrawal of this rejection are therefore requested.

In view of the above, Applicants respectfully submit that the present claims define subject matter which is patentable over the cited art. Accordingly, the Examiner is requested to withdraw all rejections and allow the currently pending claims.

If the Examiner has any questions or comments, please contact Craig A. McRobbie, Registration No. 42,874 at the offices of Birch, Stewart, Kolasch & Birch, LLP.

Attached hereto is a marked-up version of the changes made to the application by this Amendment.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicant(s) respectfully petition(s) for a two (2) month extension of time for filing a reply in connection with the present application, and the required fee of \$410.00 is attached hereto.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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By



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Attachment: Version with Markings to Show Changes Made

(Rev. 02/20/02)

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claims 1, 3-9, and 11-16 have been cancelled.

Claims 28 and 29 have been added.